Troy–Earth Observation for Implementing U.S. Ecosystem Accounts

Austin Troy, University of Colorado Denver
Kenneth Bagstad, U.S. Geological Survey
Mehdi Heris, Hunter College, City University of New York

1. Our project provides tools and data to help implement U.S. Ecosystem Accounts, based on the System of Environmental Economic Accounting (SEEA) standards that the U.N has proposed.
2. We present two models for the continental United States that leverage nationwide datasets and novel analytic approaches to characterize and quantify two ecosystem accounts associated with urban trees:
   - Heat Mitigation: we quantified the heat mitigation impacts of urban trees in terms of temperature and monetary value.
   - Rainfall Interception: we quantified the rainfall interception effects of urban trees in terms of water volume and monetary volume
3. We also developed a model that maps pollinator habitat and quantifies the economic value of the resulting pollination ecosystem services to crop productivity for the continental US.